

New Exotic Crane-flies (Tipulidae: Diptera). Part XVII¹

CHARLES P. ALEXANDER²

The preceding part under this general title was published in ENTOMOLOGICAL NEWS, Vol. 79 (9): 240-248. At this time I am continuing the survey of Hexatomine crane-flies that were collected in South India, Assam and Sikkim by Dr. Fernand Schmid, who has made the single greatest contribution of materials in this family for the Oriental fauna.

Riedelomyia lipoleuca, NEW SPECIES

General coloration of mesonotum brownish yellow, patterned with darker brown, thoracic pleura with two broad dark brown longitudinal stripes that are separated by a narrow yellow line; antennae with the fusion-segment comprised of five articles; legs yellow, without white pattern, femora with a vaguely indicated darkened subterminal ring; wings yellow, patterned with light brown, the apparent vein R_2 transverse.

Male.—Length about 7 mm; wing 6.5 mm.

Rostrum brownish yellow, palpi black, the intermediate segments short and crowded, terminal segment smaller, oval. Antennae with fusion-segment yellowed, remainder light brown, the fusion comprised of five segments, the succeeding ones short, outer segments longer but shorter than their excessively long verticils. Head brown.

Pronotum light brownish yellow. Mesonotal praescutum brownish yellow with two poorly indicated slightly darker intermediate stripes, sublateral darkened areas broader but paler, lateral margins darker brown, pseudosutural foveae yellowed; posterior sclerites of notum brownish yellow, vaguely patterned with slightly darker, including the scutal lobes. Pleura with the restricted ground obscure yellow, including the dorsopleural region and a narrow stripe between two broader subequal darker brown longitudinal stripes. Halteres yellow, knobs weakly darkened. Legs with fore coxae brown, remaining coxae and all trochanters yellow; remainder of legs light yellow, femora with a vaguely indicated darkened subterminal ring that is about one-half as extensive as the yellowed apex. Wings yellowed, the prearcular and costal fields clearer; a relatively conspicuous light brown pattern, including areas at origin of R_s , stigma, cord, outer end of cell $1st\ M_2$ and outer end of cell R_2 ; smaller brown marginal areas at ends of all longitudinal veins, smallest on R_5 , progressively larger posteriorly; an oval marking in cell R at mid-distance between arculus and origin of R_s ; still other vague clouds on veins and in cells before cord, including especially cells M and both Anals; veins yellow, darker in the patterned areas. Costal fringe of male long and conspicuous; macrotrichia on longitudinal veins beyond general level of cord, sparse and weak on R_s and $2nd\ A$. Venation: The apparent vein R_2 transverse, subequal to R_{1+2} , placed just distad of $r-m$; $m-cu$ at near one-third M_{3+4} .

¹ Accepted for publication December 9, 1968.

² Contribution from the Entomological Laboratory, University of Massachusetts, Amherst, Mass. 01002.

Abdomen dark reddish brown, sides blackened. Male hypopygium with the outer dististyle a simple yellow blade that narrows outwardly, apex slightly recurved, tip obtuse; inner style longer, stout, tip broadly obtuse.

Habitat.—South India. *Holotype*: ♂, Periyakanal, Kerala, 5,000–5,500 feet, December 17, 1958 (Fernand Schmid).

Riedelomyia lipoleuca is distinguished from other members of the genus by the lack of white pattern on the legs. The other regional species, all from South India, include *R. chionopus* Alexander, with the legs dark except for the white tarsi, together with *R. gratiosa* Alexander and *R. niveiapicalis* (Brunetti), where the tips of the femora and tibiae as well as the outer tarsal segments are whitened. A comparison of the three Oriental species then known was provided by the writer when the genus *Riedelomyia* was proposed (Philippine Jour. Sci., 35: 481–484; 1928). It should be emphasized that the genus as here restricted is very close to *Eupilaria* Alexander, differing in the loss of tibial spurs and in the reduced venation of the radial field of the wing, the sector having only two branches. The Australasian species hitherto referred to *Riedelomyia* include *teucholabina* (Alexander) and *papuensis* Alexander which now are known to belong to a different genus. The male sex of these now is known and the hypopygial structure preclude their being placed in the same genus as the Oriental species above listed.

Atarba (Atarbodes) bilobula, NEW SPECIES

General coloration yellow; wings yellowed, *Sc* relatively long, *Sc*₁ ending opposite two-thirds *Rs*; abdomen without a darkened subterminal ring; male hypopygium with phallosome distinctive, including elongate rodlike apophyses, aedeagus short, terminating in two rounded lobes.

Male.—Length about 4.5 mm; wing 5.1 mm; antenna about 0.8 mm.

Rostrum yellow; palpi yellow, terminal segment black. Antenna and head yellow.

Thorax light yellow; mesonotal vestiture sparse, long and erect. Halteres yellow. Legs yellow, the genua scarcely to very narrowly darkened, tips of tibiae narrowly infuscated; tarsi yellow, outer segments slightly darker. Wings yellow, costal border slightly darker; veins yellow. Venation: *Sc* relatively long, *Sc*₁ ending about opposite two-thirds *Rs*; cell 1st *M*₂ small.

Abdomen yellow, without a darkened subterminal ring. Male hypopygium with dististyles fused only on basal fourth, outer style relatively slender, straight, outer fourth with coarse denticles, inner style longer, curved gently to the narrowly obtuse tip. Phallosome with two long apophyses that appear as slender curved rods narrowing to the pointed tips, narrowest beyond midlength. Aedeagus short, subequal in length to the apophyses, terminating in two rounded lobes.

Habitat.—Sikkim. *Holotype*: ♂, Teng, 4,600 feet, August 1, 1959 (Fernand Schmid).

The structure of the hypopygium readily distinguished the present fly from all regional allies. The species with the apophyses most similar is *Atarba* (*Atarbodes*) *dicera* new species which has the thoracic coloration and structure of the aedeagus quite distinct.

***Atarba* (*Atarbodes*) *bismila*, NEW SPECIES**

General coloration of entire body pale yellow, in male the two subterminal abdominal segments brown; legs yellow, tips of femora very narrowly brownish black; wings light yellow, the veins deeper yellow; male hypopygium with spines of outer dististyle short but strong; phallosome including the long slender aedeagus and a subtending pale sheath that terminates in two narrow pale blades.

Male.—Length about 5.3–5.5 mm; wing 5.5–5.8 mm; antenna about 0.9–1 mm.

Rostrum and palpi yellow, terminal segment of latter intensely black (broken in female). Antennae yellow, slightly longer and stouter in female. Head yellow.

Thorax uniformly pale yellow. Halteres yellow. Legs yellow, tips of femora very narrowly brownish black, of tibiae even more narrowly darkened. Wings light yellow, costal region and veins deeper yellow. Venation: *Sc* relatively long, *Sc*₁ ending about opposite one-third *Rs*, *Sc*₂ removed, just beyond origin of *Rs*; outer radial branches gently divergent, cell *R*₄ at margin more extensive than cell *R*₂.

Abdomen yellow, in male segments seven and eight brown to form a subterminal ring, hypopygium yellow. Male hypopygium with mesal face of basistyle with very long setae. Dististyles fused only at bases, outer style relatively short and stout, black, spines short and strong; inner style a long slender curved rod. Phallosome including the aedeagus and a subtending pale sheath, at apex produced into two pale blades, their tips acute, ending shortly before apex of aedeagus.

Habitat.—Assam, Sikkim. *Holotype*: ♂, Chumtang, Sikkim, 5,120 feet, July 18, 1959 (Fernand Schmid). *Allotopotype*: ♂, pinned with type. *Paratypes*: 1 ♂, Teng, Sikkim, 4,600 feet, August 1, 1959; 1 ♂, Lingtham, Sikkim, 6,500 feet; ♂, ♀, Bomdi La, Kameng, Northeast Frontier Agency, Assam, 8,800 feet, June 16–17, 1961 (all Schmid).

Atarba (*Atarbodes*) *bismila* is readily told from all similar regional allies by the hypopygial structure, especially the phallosome.

***Atarba* (*Atarbodes*) *decincta*, NEW SPECIES**

General coloration of entire body, antennae and halteres pale yellow; legs yellow, tips of femora and tibiae narrowly blackened; wings yellow, veins darker yellow; abdomen with no indication of a darkened subterminal ring; male hypopygium with outer dististyle relatively short and compact, black, with a double row of long black appressed spines, with about five on either side, phallosome without spinous points.

Male.—Length about 5 mm; wing 5.5 mm; antenna about 1.3 mm.

Rostrum light yellow, first segment of palpus yellow, second brown, outer two black. Antennae and head yellow.

Thorax entirely light yellow. Halteres and legs yellow, tips of femora and tibiae narrowly blackened, outer tarsal segments dark brown. Wings yellow with darker yellow veins. Venation: Sc_1 ending shortly before midlength of Rs , Sc_2 opposite one-fifth this vein; $m-cu$ just beyond fork of M .

Abdomen pale whitish yellow, only the outer dististyles black. Male hypopygium with outer dististyle relatively short and compact, with unusually long appressed black spines arranged in a double row, with about five on either side, additional to a terminal extension, the proximal one or two teeth very small, inner style longer, appearing as a flattened yellow paddle. Phallosome with apophyses appearing as flattened yellow blades with no spinous points.

Habitat.—Assam. *Holotype*: ♂, Chingsao, Manipur, 3,800 feet, June 13, 1960 (Fernand Schmid).

The closest relative of the present fly is *Atarba* (*Atarbodes*) *flava* Brunetti which likewise has the narrowly blackened tips to the femora and tibiae. In *flava* the abdomen has a narrow incompletely darkened subterminal ring, as shown by specimens in my collection received from Brunetti and Edwards that had been compared with type materials. The male hypopygium of *flava* has the blackened spines of the outer dististyle different in size and arrangement, the more proximal ones small, the outer ones progressively longer, with two or three still longer spines near outer end, none of these as long as certain of those in *decincta*.

***Atarba* (*Atarbodes*) *dicera*, NEW SPECIES**

General coloration yellow, margins of mesonotal praescutum and scutum chestnut brown; antennae, halteres and legs yellow; wings dark yellow, including the veins; abdomen of male with eighth segment brown to form a narrow ring; male hypopygium with outer dististyle having relatively few spines all on outer third; phallosome including a pair of rodlike apophyses that narrow into long slender spines.

Male.—Length about 4.5–4.6 mm; wing 4.8–5 mm; antenna about 0.9 mm.

Rostrum brownish yellow, palpi brownish yellow, terminal segment black. Antennae yellowed. Head above brownish black, yellowed on occiput.

Cervical region and pronotum yellow. Mesonotum polished yellow, anterior and lateral borders of praescutum and scutum broadly chestnut brown, mediotergite paler brown. Pleura and pleurotergite clear yellow. Halteres yellow. Legs yellow, outer tarsal segments with darkened setae; in the paratype apex of femur very narrowly darkened. Wings deep yellow, including the veins. Veins of outer half of wing with macrotrichia, including outer ends of both Anals and outer end of basal section of Cu_1 .

Venation: *Sc* relatively long, ending at from one-fifth to beyond one-third *Rs*, outer branches of the latter gently divergent, cell *R*₄ at margin slightly more extensive than *R*₂; *m-cu* before midlength of *M*₃₊₄.

Abdomen yellow, eighth segment brown to form a narrow ring, hypopygium yellowed except for the blackened outer dististyles. Male hypopygium with dististyles small in comparison with the elongate basistyles, narrowly fused basally; outer style blackened, with relatively few teeth, all restricted to the outer third; inner style longer, pale, with a narrow flange near outer end. Phallosome conspicuous, the apophyses including two broadly flattened blades with obtuse tips and a pair of more sclerotized straight rods, each with the outer fourth prolonged at nearly a right angle into a long straight spine.

Habitat.—Sikkim. *Holotype*: ♂, Mangalbarey, 2,800 feet, April 30, 1959 (Fernand Schmid). *Paratype*: ♂, Mangang, 3,600 feet, May 9, 1959 (Schmid).

The present fly is told from other regional species by the coloration of the mesonotum and especially by hypopygial structure, including the outer dististyle and the phallosome. *Atarba* (*Atarbodes*) *trimclania* Alexander, of South India, has the mesonotum patterned with dark but with the hypopygium entirely distinct.

***Atarba* (*Atarbodes*) *sikkimensis*, NEW SPECIES**

General coloration of body, antennae, halteres and legs yellow; wings light yellow, *Sc* long; abdomen with a narrow brownish black subterminal ring; male hypopygium with dististyles fused basally, outer margin of the outer style with blackened spines; apophyses appearing as flattened plates with both margins microscopically spinulose.

Male.—Length about 5.5–6.2 mm; wing 6–7 mm; antenna about 1.0–1.1 mm.

Female.—Length about 5.5 mm; wing 6 mm.

Rostrum yellow, palpi black, in some individuals with proximal segments paler. Antennae of male yellow to brownish yellow, brown in female. Head yellow.

Thorax yellow, virtually unpatterned. Halteres and legs yellow, outer tarsal segments slightly darker. Wings light yellow, including the veins, trichia darker. Venation: *Sc* long, *Sc*₁ ending a short distance before fork of *Rs*. *Sc*₂ removed; branches of *Rs* strongly divergent near outer ends, cell *R*₄ at margin about one-half more extensive than cell *R*₂; *M*₃₊₄ shorter than *M*₄; *m-cu* shortly beyond fork of *M*.

Abdomen obscure yellow, segments seven and eight in male brownish black to form a narrow ring. Male hypopygium with dististyles extensively fused to beyond midlength, outer style shorter, with appressed spinules on outer margin of distal two-thirds. Phallosome with outer apophyses distinctive, appearing as flattened plates, their outer margins protuberant, with abundant coarse yellow spines, inner edge near apex with fewer more slender spines, the tip farther produced into one or two still stronger spines.

Habitat.—Sikkim. *Holotype*: ♂, Lachen, 8,900 feet, June 13, 1959 (Fernand Schmid). *Allotype*: ♀, Lachung, 8,610 feet, July 10, 1959. *Paratopotypes*: 3♂♂. *Paratypes*: ♂♀, with the allotype, July 6–9, 1959; ♂♀, Chumtang, 5,120 feet, July 18, 1959; ♂♀, Nannasa, 9,500 feet, July 13, 1959 (all Schmid).

Atarba (Atarbodes) sikkimensis is quite distinct from *A. (A.) flava* Brunetti and other regional species. In the present species several of the individuals show persistent greenish body tints that indicate the probability of stronger green coloration in living specimens.

The Entomologist's Record

To encourage the publication of concise and useful new distribution records, corrections of previously published erroneous records, misidentifications, short field notes, and current news items about entomologists, amateur and professional, entomology departments and museums, prompt (monthly) publication is offered in this department.

International Commission on Zoological Nomenclature: Announcement.

Required six-months' notice is given on the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following names listed by case number :

(see, *Bull. zool. Nomencl.* 25, pt. 6, 28th February 1969) :

- 1859. Validation of emendation to *patchae* of *patchiae* (*Schizoncurea*) Börner & Blunck, 1916; suppression of *Schizoncurea patchi* Meunier, 1917 (Insecta, Hemiptera).
- 1864. Suppression of *Dicyphus tamaricis* Puton, 1886 (Insecta, Hemiptera).
- 1858. Type specimen for *Anthocoris pini* Bärensprung, 1858 (Insecta, Hemiptera).

Comments should be sent in duplicate, citing case number, to the Secretary, International Commission on Zoological Nomenclature, c/o British Museum (Natural History), Cromwell Road, London, S.W.7, England. Those received early enough will be published in the Bulletin of Zoological Nomenclature. W. E. CHINA, *Assistant Secretary*.

Overwintering by Pupal Nymphalids in New York?—Members of the genus *Nymphalis* (Lepidoptera: Nymphalidae) normally overwinter as adults at the latitude of central New York. Klots (*Field Guide to the Butterflies*, p. 106) records both *N. antiopa* L. and *N. milberti* Latr. overwintering as pupae. On April 7, 1969, I took a freshly emerged *N. antiopa* at Slaterville Springs, Tompkins Co., N. Y., which voided the meconium in my hand. The following day I took a seemingly fresh *N. milberti* at Robinson Hollow, Town of Richford, Tioga Co., N. Y. These are the

(Continued on page 138)